A six-year analysis of under-five mortality: The determinants of preventable perinatal death in Pasir Mas district, Kelantan

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ABSTRACT

Introduction: Under-5 mortality is a significant indicator for achieving the Sustainable Development Goal 2023. Perinatal death, including stillbirth and early neonatal death, is a major contributor to this mortality rate. The loss of a baby through stillbirth or shortly after delivery is a heartbreaking tragedy for parents and families. While high-quality and evidence-based interventions exist to prevent these losses, the global and local burden of perinatal death continues to increase. This study was conducted to identify the determinants of preventable perinatal death in Pasir Mas district from 2017 to 2022. **Materials and Methods:** A cross-sectional study was conducted from April to Jun 2023, utilizing data obtained from Stillbirth and Under-Five Mortality Form (SU5MR-1/2012). The data collected spanned from January 2017 till December 2022. IBM SSPS Version 26 was used to analyse. The outcome was categorized into preventable and non-preventable death. Multiple logistic regression was employed to establish the determinants of preventable perinatal death. **Results:** A total of 204 perinatal deaths were included in this study. Mean age of mothers that have preventable perinatal death was 30.69 (6.15). Preventable perinatal death was found higher among mother with lower educational level (71.7%), unemployed (71.7%), household income less than RM3000 (66.0%), multiparity (66.0%), vaginal delivery (66.0%) and male (69.8%). Meanwhile, the mean birth weight of babies having preventable perinatal death was 1.8 (1.05) kg. The comorbidities that contributed to preventable perinatal death included prematurity (18.9%), infection (13.2%), syndromic (3.8%), condition related to perinatal (3.8%), and cardiac (1.9%). In relation to obstetric factors, the place of delivery OR 12.9 (95% CI 2.69,62.33) (p=0.001) and maternal risk factors OR 0.38 (95% CI 0.16,0.89) (p= 0.026) demonstrated a significant association with preventable perinatal death. Regarding foetal factors, gestational age at delivery OR 4.97 (95% CI 1.46,16.96) (p=0.011), baby weight OR 5.2 (95% CI 1.66,16.33) (p=0.005) and number of foetus OR 6.6 (95% CI 2.03,21.47) (p=0.002) were determinants for preventable perinatal death. **Conclusion:** In summary, place of delivery, maternal risk factors, gestational age at delivery, baby weight and number of foetuses were significant determinants of preventable perinatal death. Hence, through prioritizing and enhancing interventions targeted at specific factors, it becomes feasible to further reduce preventable perinatal deaths and, in turn, enhance the perinatal mortality rate.